

## **STIC Biotechnology Systems Branch**

### **RAW SEQUENCE LISTING ERROR REPORT**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:**

Application Serial Number: 10/069,772 A  
Source: JPM  
Date Processed by STIC: 2/24/06

**THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.**

**PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:**

- 1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

**FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221**

**TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:**

**<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>**

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

**Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:**

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):  
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06

## Raw Sequence Listing Error Summary

**ERROR DETECTED**      **SUGGESTED CORRECTION**      **SERIAL NUMBER:** 10/069,772 A

**ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE**

1  Wrapped Nucleic  
       Wrapped Aminos      The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2  Invalid Line Length      The rules require that a line not exceed 72 characters in length. This includes white spaces.

3  Misaligned Amino  
      Numbering      The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.

4  Non-ASCII      The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.

5  Variable Length      Sequence(s) \_\_\_\_\_ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6  PatentIn 2.0  
      "bug"      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) \_\_\_\_\_. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

7  Skipped Sequences  
      (OLD RULES)      Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
This sequence is intentionally skipped  
Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

8  Skipped Sequences  
      (NEW RULES)      Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence.  
<210> sequence id number  
<400> sequence id number  
000

9  Use of n's or Xaa's  
      (NEW RULES)      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10  Invalid <213>  
      Response      Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence. (see item 11 below)

11  Use of <220>  
      →      Sequence(s) 1 missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section or use "chemically synthesized" as explanation. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32), also Sec. 1.823 of Sequence Rules

12  PatentIn 2.0  
      "bug"      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13  Misuse of n/Xaa      "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid



## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/069,772A

DATE: 02/24/2006

TIME: 15:43:05

Input Set : F:\Feussner-10069772-060211-SEQLIST.txt

Output Set: N:\CRF4\02242006\J069772A.raw

58	Cys	Gly	His	His	Ala	Phe	Ser	Asp	Tyr	Gln	Leu	Ile	Asp	Asp	Ile	Val	
59					105				110				115				
61	gga	tgc	gtc	ctc	cat	tgc	gct	ctc	acc	ccg	tat	ttc	tct	tgg	aaa	440	
62	Gly	Phe	Val	Leu	His	Ser	Ala	Leu	Leu	Thr	Pro	Tyr	Phe	Ser	Trp	Lys	
63					120				125				130				
65	tat	agc	cac	agg	aat	cac	cac	gcc	aac	aca	aat	tca	ctc	gat	aac	gat	488
67	Tyr	Ser	His	Arg	Asn	His	His	Ala	Asn	Thr	Asn	Ser	Leu	Asp	Asn	Asp	
68					135				140				145				
70	gaa	gtt	tac	att	cct	aaa	cgt	aag	tgc	aag	gtc	att	tat	tcc	aaa	536	
71	Glu	Val	Tyr	Ile	Pro	Lys	Arg	Lys	Ser	Lys	Val	Lys	Ile	Tyr	Ser	Lys	
72	150				155				160				165				
74	ctt	ctt	aac	aat	cca	ccc	ggg	cga	gtg	tgc	act	ttg	gtg	ttt	cgg	ttg	584
75	Leu	Leu	Asn	Asn	Pro	Pro	Gly	Arg	Val	Phe	Thr	Leu	Val	Phe	Arg	Leu	
76					170				175				180				
78	act	tta	gga	ttt	ccg	tta	tac	ctc	tta	act	aat	atc	tcg	ggc	aag	aaa	632
79	Thr	Leu	Gly	Phe	Pro	Leu	Tyr	Leu	Leu	Thr	Asn	Ile	Ser	Gly	Lys	Lys	
80					185				190				195				
82	tac	ggg	agg	ttt	gcc	aac	cac	ttt	gat	ccc	atg	agt	cca	att	ttc	aac	680
83	Tyr	Gly	Arg	Phe	Ala	Asn	His	Phe	Asp	Pro	Met	Ser	Pro	Ile	Phe	Asn	
84					200				205				210				
86	gat	cgt	gaa	cgc	gtt	caa	gtt	ttg	cta	tcc	gat	ttc	ggt	ctt	ctc	gct	728
87	Asp	Arg	Glu	Arg	Val	Gln	Val	Leu	Leu	Ser	Asp	Phe	Gly	Leu	Leu	Ala	
88					215				220				225				
90	gta	ttt	tat	gca	atc	aag	ctt	ctt	gta	gca	gca	aaa	ggg	gca	gct	tgg	776
91	Val	Phe	Tyr	Ala	Ile	Lys	Leu	Leu	Val	Ala	Ala	Lys	Gly	Ala	Ala	Trp	
92	230				235				240				245				
94	gta	atc	aac	atg	tac	gca	att	cca	gta	cta	gtt	gta	agc	gtg	ttc	ttc	824
95	Val	Ile	Asn	Met	Tyr	Ala	Ile	Pro	Val	Leu	Gly	Val	Ser	Val	Phe	Phe	
96					250				255				260				
99	gtt	ttg	atc	aca	tat	ttg	cac	cac	cat	ctc	tca	ctc	cct	cat	tat		872
100	Val	Leu	Ile	Thr	Tyr	Leu	His	His	Thr	His	Leu	Ser	Leu	Pro	His	Tyr	
101					265				270				275				
103	gat	tca	acc	gaa	tgg	aac	tgg	atc	aaa	ggc	gcc	tta	tca	aca	atc	gat	920
104	Asp	Ser	Thr	Glu	Trp	Asn	Trp	Ile	Lys	Gly	Ala	Leu	Ser	Thr	Ile	Asp	
105					280				285				290				
107	agg	gat	ttc	ggg	ttc	ctg	aat	cgg	gtt	ttc	cac	gac	gtt	aca	cac	act	968
108	Arg	Asp	Phe	Gly	Phe	Leu	Asn	Arg	Val	Phe	His	Asp	Val	Thr	His	Thr	
109					295				300				305				
111	cac	gtc	ttg	cat	cat	ttg	atc	tca	tac	att	cca	cat	tat	cat	gca	aag	1016
112	His	Val	Leu	His	His	Leu	Ile	Ser	Tyr	Ile	Pro	His	Tyr	His	Ala	Lys	
113	310				315				320				325				
115	gaa	gca	agg	gat	gca	atc	aag	cca	gtg	ttg	ggc	gag	tac	tat	aaa	atc	1064
116	Glu	Ala	Arg	Asp	Ala	Ile	Lys	Pro	Val	Leu	Gly	Glu	Tyr	Tyr	Lys	Ile	
117					330				335				340				
119	gac	agg	act	cca	att	ttc	aaa	gca	atg	tat	aga	gag	gct	aag	gaa	tgc	1112
120	Asp	Arg	Thr	Pro	Ile	Phe	Lys	Ala	Met	Tyr	Arg	Glu	Ala	Lys	Glu	Cys	
121					345				350				355				
123	atc	tac	atc	gag	ccc	gat	gag	gat	agc	gag	cac	aaa	ggt	gtg	ttc	tgg	1160
124	Ile	Tyr	Ile	Glu	Pro	Asp	Glu	Asp	Ser	Glu	His	Lys	Gly	Val	Phe	Trp	

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DATE: 02/24/2006

PATENT APPLICATION: US/10/069,772A

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Input Set : F:\Feussner-10069772-060211-SEQLIST.txt

Output Set: N:\CRF4\02242006\J069772A.raw

125	360	365	370	
127	tac cac aag atg taa	tcaaaaagggt gtatgtcaat	gcaatttgtat gcttaattaa	1215
128	Tyr His Lys Met			
130	375			
132	gttggtaaac tttctattcc	gtgtataaaa ttatcattaa	gagaaaaaaaaaaaaaaaa	1275
134	aaaaaaaaaaa			1285
137	<210> SEQ ID NO: 2			
138	<211> LENGTH: 377			
139	<212> TYPE: PRT			
140	<213> ORGANISM: Calendula officinalis			
143	<400> SEQUENCE: 2			
144	Met Gly Ala Gly Gly Arg Met Ser Asp Pro Ser Glu Gly Lys Asn Ile			
145	1	5	10	15
147	Leu Glu Arg Val Pro Val Asp Pro Pro Phe Thr Leu Ser Asp Leu Lys			
148	20	25	30	
150	Lys Ala Ile Pro Thr His Cys Phe Glu Arg Ser Val Ile Arg Ser Ser			
151	35	40	45	
153	Tyr Tyr Val Val His Asp Leu Ile Val Ala Tyr Val Phe Tyr Tyr Leu			
154	50	55	60	
156	Ala Asn Thr Tyr Ile Pro Leu Ile Pro Thr Pro Leu Ala Tyr Leu Ala			
157	65	70	75	80
159	Trp Pro Val Tyr Trp Phe Cys Gln Ala Ser Ile Leu Thr Gly Leu Trp			
160	85	90	95	
163	Val Ile Gly His Glu Cys Gly His His Ala Phe Ser Asp Tyr Gln Leu			
164	100	105	110	
166	Ile Asp Asp Ile Val Gly Phe Val Leu His Ser Ala Leu Leu Thr Pro			
167	115	120	125	
169	Tyr Phe Ser Trp Lys Tyr Ser His Arg Asn His His Ala Asn Thr Asn			
170	130	135	140	
172	Ser Leu Asp Asn Asp Glu Val Tyr Ile Pro Lys Arg Lys Ser Lys Val			
173	145	150	155	160
175	Lys Ile Tyr Ser Lys Leu Leu Asn Asn Pro Pro Gly Arg Val Phe Thr			
176	165	170	175	
178	Leu Val Phe Arg Leu Thr Leu Gly Phe Pro Leu Tyr Leu Leu Thr Asn			
179	180	185	190	
181	Ile Ser Gly Lys Lys Tyr Gly Arg Phe Ala Asn His Phe Asp Pro Met			
182	195	200	205	
184	Ser Pro Ile Phe Asn Asp Arg Glu Arg Val Gln Val Leu Leu Ser Asp			
185	210	215	220	
187	Phe Gly Leu Leu Ala Val Phe Tyr Ala Ile Lys Leu Leu Val Ala Ala			
188	225	230	235	240
190	Lys Gly Ala Ala Trp Val Ile Asn Met Tyr Ala Ile Pro Val Leu Gly			
191	245	250	255	
194	Val Ser Val Phe Phe Val Leu Ile Thr Tyr Leu His His Thr His Leu			
195	260	265	270	
197	Ser Leu Pro His Tyr Asp Ser Thr Glu Trp Asn Trp Ile Lys Gly Ala			
198	275	280	285	
200	Leu Ser Thr Ile Asp Arg Asp Phe Gly Phe Leu Asn Arg Val Phe His			
201	290	295	300	

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203 Asp Val Thr His Thr His Val Leu His His Leu Ile Ser Tyr Ile Pro  
204 305 310 315 320  
206 His Tyr His Ala Lys Glu Ala Arg Asp Ala Ile Lys Pro Val Leu Gly  
207 325 330 335  
209 Glu Tyr Tyr Lys Ile Asp Arg Thr Pro Ile Phe Lys Ala Met Tyr Arg  
210 340 345 350  
212 Glu Ala Lys Glu Cys Ile Tyr Ile Glu Pro Asp Glu Asp Ser Glu His  
213 355 360 365  
215 Lys Gly Val Phe Trp Tyr His Lys Met  
216 370 375

## SEQUENCE LISTING

-> 219  
-> 221 <110> APPLICANT: Feussner, Ivo  
-> 221 <110> APPLICANT: Feussner, Ivo  
-> 226 <120> TITLE OF INVENTION: Fatty acid desaturase gene from plants  
-> 226 <120> TITLE OF INVENTION: Fatty acid desaturase gene from plants  
-> 228 <130> FILE REFERENCE: 50669  
-> 228 <130> FILE REFERENCE: 50669  
-> 230 <140> CURRENT APPLICATION NUMBER: US 10/069,772A  
-> 231 <141> CURRENT FILING DATE: 2002-02-28  
-> 233 <160> NUMBER OF SEQ ID NOS: 14  
-> 233 <160> NUMBER OF SEQ ID NOS: 14  
-> 235 <170> SOFTWARE: PatentIn version 3.3

See error  
explanation  
on page 5.

↓ This is from sequence 2

Lys Gly Val Phe Trp Tyr His Lys Met  
370                                   375

SEQUENCE LISTING

```

<110> Feussner, Ivo
      Hornung, Ellen
      Fritzsche, Kathrin
      Peitzsch, Nicola

<120> Fatty acid desaturase gene from plants

<130> 50669

<140> US 10/069,772

<141> 2002-02-28

<160> 14

<170> PatentIn version 3.3

<210> 3
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 3
ccdrtyttct ctggaarwwh agycaycg

```

- This appeared after Sequence 2.
- Per Sequence Rules, show <110> - <170> only at the beginning of the sequence listing.
- Delete <110> - <170> from this section.

=

<210> 6  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<220>  
<221> misc\_feature  
<222> (13)..(13)  
<223> n is inositol

"N" CAN represent only a nucleotide, not an alcohol.

<400> 6  
ccartyccat tcngwbgart crtartg

27

Invalid  
response

pls see item # 13 on error summary  
Sheet,

<210> 15  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> none Invalid Response  
<400> 15  
tattccaaac ttcttaacaa tccacccg

pls explain source of  
genetic material.

<210> 16  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> none Same error

<400> 16  
caattccagt actaggtgta agtgtgtt

See item #<sup>28</sup> !!

on error  
summary  
sheet,

RAW SEQUENCE LISTING ERROR SUMMARY                   DATE: 02/24/2006  
PATENT APPLICATION: US/10/069,772A               TIME: 15:43:06

- Input Set : F:\Feussner-10069772-060211-SEQLIST.txt  
Output Set: N:\CRF4\02242006\J069772A.raw

valid Line Length:

rules require that a line not exceed 72 characters in length. This includes spaces.

j#:1; Line(s) 24,28,29,30,31,32,33,34,36,37,38,39,40,41,42,43,44,45,46,47  
j#:1; Line(s) 48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,67,68  
j#:1; Line(s) 69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88  
j#:1; Line(s) 89,90,91,92,93,94,95,96,97,99,100,101,102,103,104,105,106  
j#:1; Line(s) 107,108,109,110,111,112,113,114,115,116,117,118,119,120,121  
j#:1; Line(s) 122,123,124,125,126,127,128,130,131,132,133  
j#:2; Line(s) 138,139,144,145,146,147,148,149,150,151,152,153,154,155,156  
j#:2; Line(s) 157,158,159,160,161,163,164,165,166,167,168,169,170,171,172  
j#:2; Line(s) 173,174,175,176,177,178,179,180,181,182,183,184,185,186,187  
j#:2; Line(s) 188,189,190,191,192,194,195,196,197,198,199,200,201,202,203  
j#:2; Line(s) 204,205,206,207,208,209,210,211,212,213,214,215

## VERIFICATION SUMMARY

DATE: 02/24/2006

PATENT APPLICATION: US/10/069,772A

TIME: 15:43:06

Input Set : F:\Feussner-10069772-060211-SEQLIST.txt  
Output Set: N:\CRF4\02242006\J069772A.raw

?7 M:282 E: Numeric Field Identifier Missing, <213> is required.  
?7 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:1  
?19 M:333 E: Wrong sequence grouping, Amino acids not in groups!  
?19 M:330 E: (2) Invalid Amino Acid Designator, NUMBER OF INVALID KEYS:2 //  
?19 M:252 E: No. of Seq. differs, <211> LENGTH:Input:377 Found:379 SEQ:2 //  
?21 M:280 W: Numeric Identifier already exists, <110> found multiple times //  
?21 M:281 W: Numeric Fields not Ordered, <110> not ordered!. //  
?26 M:280 W: Numeric Identifier already exists, <120> found multiple times //  
?26 M:281 W: Numeric Fields not Ordered, <120> not ordered!. //  
?28 M:280 W: Numeric Identifier already exists, <130> found multiple times //  
?28 M:281 W: Numeric Fields not Ordered, <130> not ordered!. //  
?30 M:280 W: Numeric Identifier already exists, <140> found multiple times //  
?30 M:281 W: Numeric Fields not Ordered, <140> not ordered!. //  
?31 M:280 W: Numeric Identifier already exists, <141> found multiple times //  
?31 M:281 W: Numeric Fields not Ordered, <141> not ordered!. //  
?33 M:280 W: Numeric Identifier already exists, <160> found multiple times //  
?33 M:281 W: Numeric Fields not Ordered, <160> not ordered!. //  
?35 M:280 W: Numeric Identifier already exists, <170> found multiple times //  
?88 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0  
?33 M:203 E: No. of Seq. differs, <160> Number Of Sequences:Input (14) Counted (16) //